

## APPENDIX

1. Method for the production of recombinant peptide by fed-batch cultivation of a microorganism in a bioreactor containing a medium comprising organic carbon source, nitrogen source and mineral salts, wherein the cultivation is carried out by the addition of the organic carbon source in oscillation feed and/or by oscillation variation of stirring speed, without exhaustion of the organic carbon source during the oscillation period, wherein the oscillation has a wave period of from about 1 to about 30 minutes, wherein the microorganism is a biological host selected from the group consisting of bacteria, yeast and animal cell, and wherein the cultivation conditions remain aerobic.

2. Method according to claims 1, wherein the organic carbon source is glucose.

3. Method according to claim 1, wherein the microorganism is *E. Coli*.

4. Method according to claim 1, wherein the oscillation feed has a square wave pattern.

5. Method according to claim 1, wherein the oscillation feed has a sinus pattern.

6. Method according to claim 1, wherein the recombinant peptide is growth hormone.

7. Method according to claim 1, wherein the recombinant peptide is human growth hormone.

8. Method according to claim 2, wherein the microorganism is *E. Coli*.

9. Method according to claim 2, wherein the oscillation feed has a square wave pattern.

10. Method according to claim 3, wherein the oscillation feed has a square wave pattern.
11. Method according to claim 2, wherein the oscillation feed has a sinus wave pattern.
12. Method according to claim 3, wherein the oscillation feed has a sinus wave pattern.
13. Method according to claim 2, wherein the recombinant peptide is growth hormone.
14. Method according to claim 3, wherein the recombinant peptide is growth hormone.
15. Method according to claim 4, wherein the recombinant peptide is growth hormone.
16. Method according to claim 5, wherein the recombinant peptide is growth hormone.
17. Method according to claim 2, wherein the recombinant peptide is human growth hormone.
18. Method according to claim 3, wherein the recombinant peptide is human growth hormone.
19. Method according to claim 4, wherein the recombinant peptide is human growth hormone.

20. Method according to claim 5, wherein the recombinant peptide is human growth hormone.

22. Method according to claim 1, wherein the oscillation feed has a square wave function of  $\pm 30\%$  of standard and a wave period of 1 minute.

23. Method according to claim 1, wherein the oscillation feed has a wave amplitude of from about  $\pm 5\%$  to  $\pm 60\%$  of standard.

24. Method according to claim 1, wherein the oscillation variation in stirring speed is  $\pm 20\%$  of standard with a square wave period of 1 minute.

25. Method according to claim 22, wherein the oscillation variation in stirring speed is  $\pm 20\%$  of standard with a square wave period of 1 minute.

26. Method according to claim 1, wherein the microorganism is *E. coli* and wherein the recombinant peptide is human growth hormone.

27. Method according to claim 1, wherein the recombinant peptide comprises recombinant human growth hormone, immune interferon, tissue plasminogen activator, or human insulin.

28. Method according to claim 1, wherein the oscillation feed and/or oscillation variation in stirring speed is from about  $\pm 5\%$  to  $\pm 60\%$  of standard.